DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-009024

Address: 333 Burma Road **Date Inspected:** 15-Sep-2009

City: Oakland, CA 94607

OSM Arrival Time: 645 **Project Name:** SAS Superstructure **OSM Departure Time:** 1845 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name: Li Jha and Xu Yumin **CWI Present:** Yes No **Inspected CWI report:** Yes **Rod Oven in Use:** Yes No No N/A N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:**

Bridge No: 34-0006 **Component: OBG** Trail Assembly

Summary of Items Observed:

On this day CALTRANS OSM Quality Assurance Inspector (QA) S. Manjunath. Math was present during the times noted above for observations relative to the work being performed.

Orthotropic Box Girder (OBG) Trial Assembly Areas

Lift 3 West (3AE to 3BE)

This Quality Assurance (QA) Inspector witnessed final tension verification against Bolting Inspection Notification No. 00155 for Longitudinal Diaphragm Splice between at PP 22 to PP 23 North and South side for Segment 3AE to 3BE. Inspected 10% on a random basis and found the tension to be in general compliance. Bolt sizes used were M24 x 70 RC Set# DHGM240010 and final torque required is 560 N-m, M24 x 95 RC Set# DHGM240021 and final torque required is 540 N-m. Manual Torque wrench is been used with Sr. No. XQ2-578.

Lift 3 West (3AE to 3BE)

This Quality Assurance (QA) Inspector witnessed final tension verification against Bolting Inspection Notification No. 00155 for Side Panel to Side Panel T-Rib Splice between at PP 22 to PP 23 North side for Segment 3AE to 3BE. Inspected 10% on a random basis and found the tension to be in general compliance. Bolt sizes used were M22 x 70 RC Set# DHGM220020 and final torque required is 520 N-m. Manual Torque wrench is been used with Sr. No. XQ2-578.

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Signed Off Green Tag's

This Quality Assurance (QA) Inspector witnessed final tension verification for following depicted locations. Inspected 10% on a random basis and found the tension to be in general compliance and thus signed off the Green Tags.

At Segment 2AW, 2BW between PP 14.5 to 15 Longitudinal Diaphragm Splice (North & South) and Bolt Size used was M24 x 95 RC Set# DHGM240020 and final torque required was 600 N-m and Green Tag No. 331.

At Segment 2AW, 2BW between PP 14.5 to 15 Longitudinal Diaphragm Splice (North & South) and Bolt Size used was M24 x 75 RC Set# DHGM240021 and final torque required was 540 N-m and Green Tag No. 332.

At Segment 4BW between PP 26 to 27, Cable Tray Support and Bolt Size used was M19 x 55 RC Set# DHG60580 and final torque required was 340 N-m and Green Tag No. 333.

Segment 1BW

This QA Inspector measured and recorded Bottom Panel I-Rib to I-Rib distance for all the 18 Ribs including measurement were being taken within 50mm from top of the Rib and 50mm from bottom of the Rib and submitted the recorded data to Mr. Mark J Miller for reviewing.

Segment 1AE to 1AAE

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for Side Panel transverse weld excavated areas, excavation were being performed as crack were discovered during UT Test. The welding was being performed against the B-WR7566 Rev.0. The weld joint is identified as OBE1A-002. The welder is identified as 045196. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-345-SMAW-1G (1F)-FCM-Repair-1.

CB4

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW). The weld joint is identified as CB201A-013 and 015. The welder was identified as 069493 and 037780. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-P-2212-Tc-U4b-FCM-1.

Segment 1AE to 1AAE

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for Bottom Panel transverse weld excavated areas, excavation were being performed as crack were discovered during UT Test. The welding was being performed against the B-WR7566 Rev.0. The weld joint is identified as OBE1A-003. The welder is identified as 045196. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-345-SMAW-1G (1F)-FCM-Repair-1.

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Segment 1AE and 1AAE

This Quality Assurance (QA) Inspector observed at 1AE to 1AAE at Bike Path Location where Bottom Panel to Side Panel weld meets noticed 7mm offset when measured by 600 mm straight edge for the same 200x200mm area re-build and grinding was being performed.

Segment 5BW

This Quality Assurance (QA) Inspector observed at 5BW Bottom Panel to T-Rib Clips Bolts Installation of Grade A325 was being performed.

Segment 5BW to 5CW

This Quality Assurance (QA) Inspector observed at 5BW to 5CW at PP 32 and PP 34 Lower Chevron Bolts Installation of Grade A325 was being performed.

CB4

This Quality Assurance (QA) Inspector observed at CB4 West side Cable excess hole pipe fillet welded ara grinding was being performed.

Segment 5BE

This Quality Assurance (QA) Inspector observed at Segment 5BE FL3 at PP 33 Stiffener welded at deck panel extension carbon arc gouging was being performed.

Segment 1BW

This Quality Assurance (QA) Inspector observed at 1BW at PP 12 Cope Hole grinding was being performed for Floor Beam to Longitudinal Diaphragm.

Segment 1BW

This Quality Assurance (QA) Inspector observed at 1BW transverse segment to segment weld excavated at three locations at Side Panel Counter Weight side and MT being performed to confirm removal of the defects.

Segment 2AW

This Quality Assurance (QA) Inspector observed at 2AW between PP 14, 15 and 16 FL3 to Bottom Panel Bolt installation area holes remaining was being performed.

Segment 6BW to 6CW

This Quality Assurance (QA) Inspector observed at 6BW to 6CW between PP 34 and PP 35, south side heat

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straightening for Longitudinal Diaphragm was being performed as Sweep Dimension noticed to be out of tolerance.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

No relevant conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact, who represents the Office of Structural Materials for your project.

Inspected By:	Math, Manjunath	Quality Assurance Inspector
Reviewed By:	Carreon, Albert	QA Reviewer